

Partnership in Innovation

PoreShield - A Soy-Biobased Solution

Who we are.

The Indiana Soybean Alliance proactively works to improve the viability of Indiana Soybean Farmers and Industry partners.



**INDIANA
SOYBEAN
ALLIANCE®**

How the checkoff works.

The Indiana Soybean Alliance checkoff program funds research, promotion and educational programs to increase demand, expand markets, and find new uses for soybeans, like PoreShield™.



CHECKOFF MATH: RETURNING \$12.34/\$1 INVESTED

Source: Cornell University (2019)

*Led by 24 volunteer soybean farmers, the Indiana Soybean Alliance invests and leverages soy checkoff dollars to MAXIMIZE PROFIT OPPORTUNITIES for all Indiana soybean farmers.

An environmentally and wallet friendly solution.

In 2008, the Indiana Department of Transportation (INDOT) estimated a cost of \$1 million per mile to repair failed road joints.

Traditional concrete protectors contain harmful chemicals such as silicon and petroleum-based fillers.



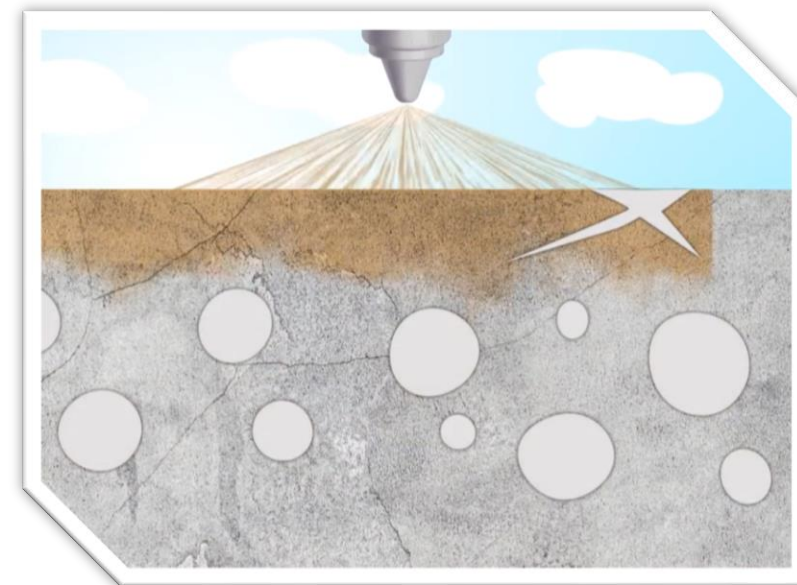
Innovating together.



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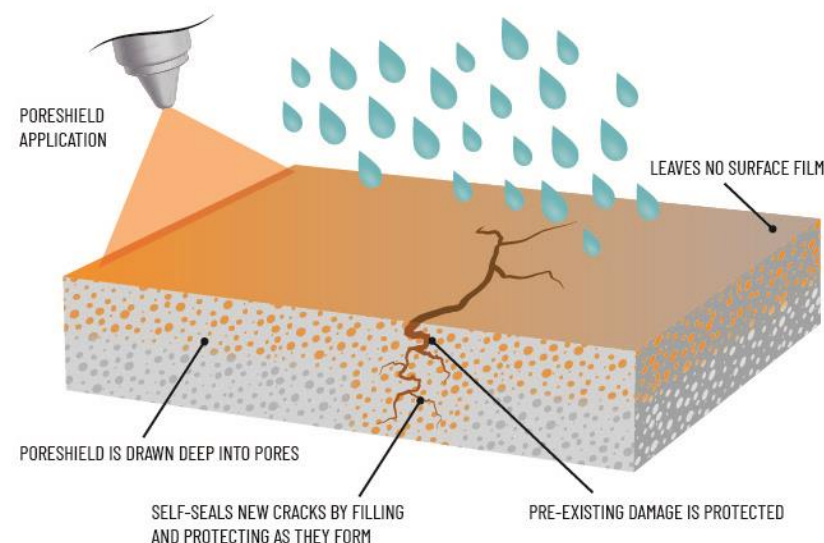
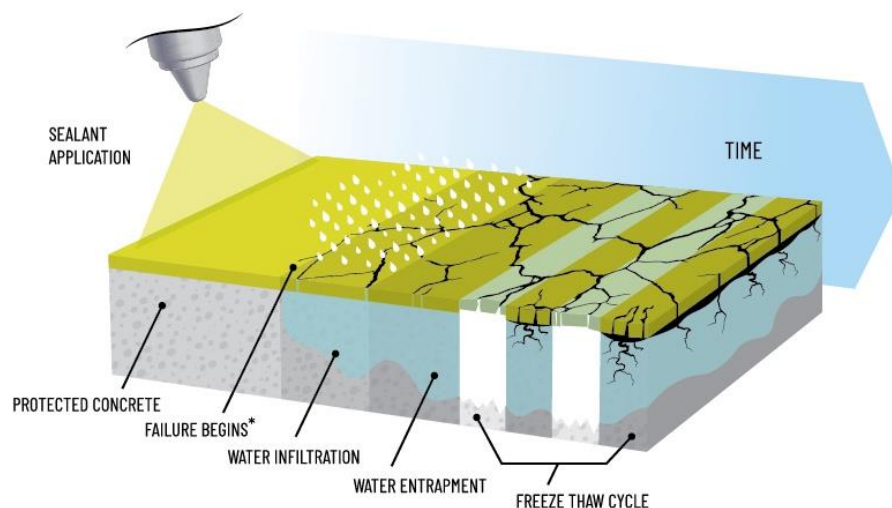
A revolutionary solution.

When the research project was complete, Joint Transportation Research Program provided INDOT with recommendations on durable pavement joint construction, including treating joints with SME-PS (Soy Methyl Ester- Polystyrene).



A new biobased technology

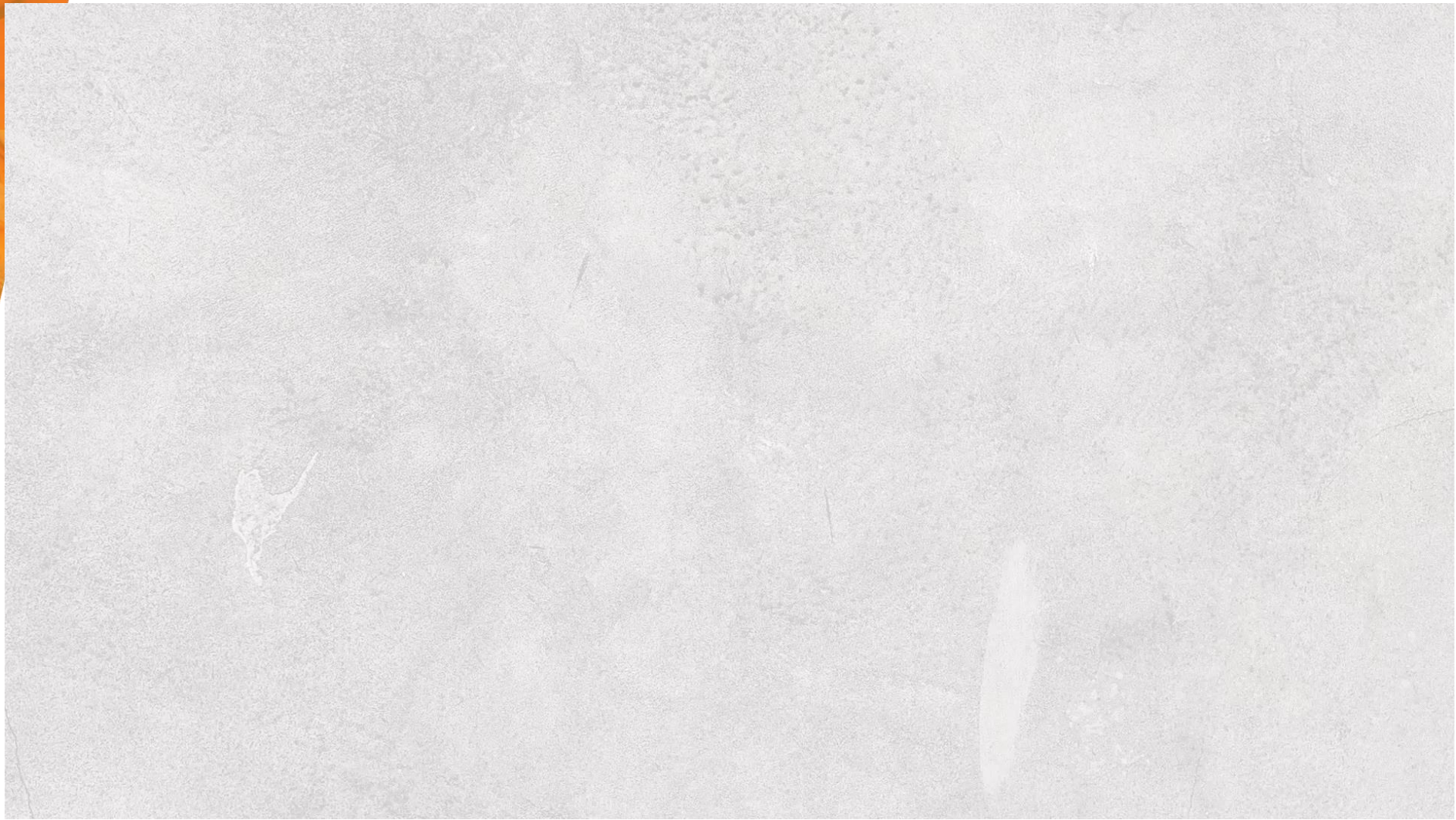
PoreShield™ is the patented technology solution from this partnership. It is a soy-based concrete durability enhancer, a revolutionary technology that creates a new category of concrete protection.



PoreShield in action

In November 2019, the first commercial application of PoreShield™ took place on a newly constructed ramp interchange outside of Fort Wayne.





A lasting solution

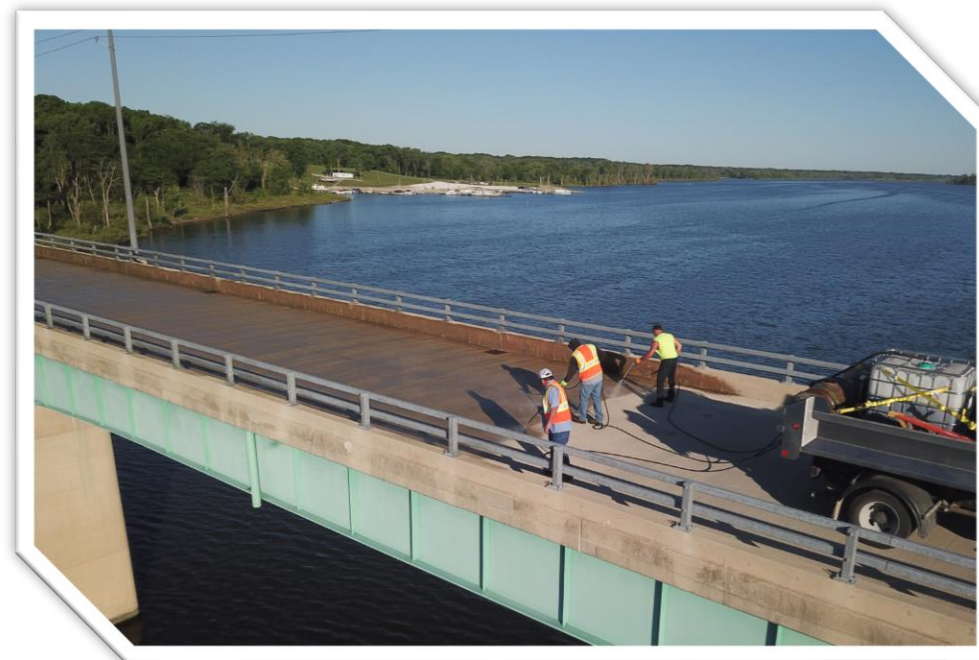
With one application, PoreShield™ protects concrete from premature deterioration and corrosion for 10+ years.



10
YEARS

Reducing concrete construction

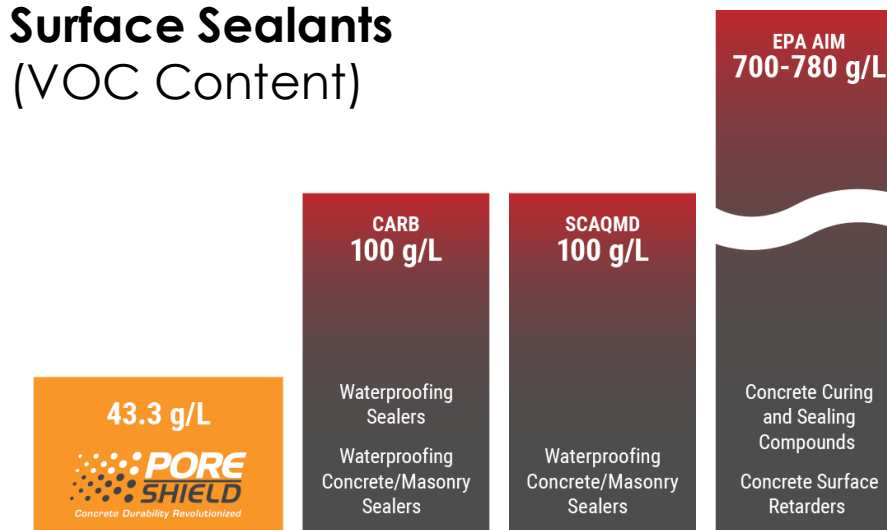
PoreShield™ treatment reduces CO₂ emissions caused by concrete construction and paving by providing more durable pavements.



Less VOCs

PoreShield™ reduces volatile organic compounds (VOCs) by 90 percent and eliminates the need for harmful solvents.

Surface Sealants (VOC Content)



	Joint Sealant	Surface Sealant	Requires solvent for Cleanup
Hot Pour Asphalt Filler	X		X
Self-leveling Silicon	X		X
Silane Coating (40%-100%)		X	X
Siloxane Coatings		X	X
Acrylic Coatings		X	X
PoreShield™	X	X	Not Required

Benefits to Indiana's economy

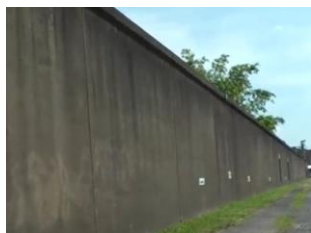
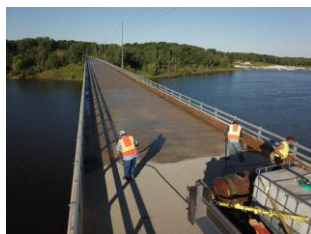
Soybean production is vital to the state's overall economy and there are 7.7 pounds of soybean oil per gallon of PoreShield™, in the form of Soy Methyl Ester.



A boost for municipalities

- ✓ Lower application costs compared to alternatives
- ✓ Reduced downtime for repair/replacement
- ✓ Savings on PPE, disposal and application clean-up
- ✓ Save on maintenance: dirt and stain resistance

US 24 was just the beginning



- Bridge decks
- Highway joints
- Mortar patch
- Precast
- Sidewalks, driveways, patios
- Animal barns
- Retaining walls
- Garages



Thank you.